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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/034,226 | 12/28/2001 | Arturo DiBenedetto | 83981 | 9090 |

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Welsh & Katz, Ltd.
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Chicago, IL 60606

EXAMINER

LEE, BENNY T

| ART UNIT | PAPER NUMBER |
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2817

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE
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| SERIAL NUMBER | FILING DATE | FIRST NAMED APPLICANT | ATTORNEY DOCKET NO. |
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| EXAMINER | |
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| ART UNIT | PAPER NUMBER |
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DATE MAILED:

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449 | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-52 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-21; 22-30; 31-39; 40-48; 49-51; 52 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.

8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. These drawings are: ☐ acceptable;
☐ not acceptable (see explanation).

10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____
has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved. ☐ disapproved (see explanation). However,
the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are
corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO
EFFECT DRAWING CHANGES", PTO-1474.

12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in
accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

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The disclosure is objected to because of the following informalities: Page 3, note that a summary of the invention" (including a subheading) should be provided such as to be consistent with PTO guidelines. Page 4, line 5, note that "OF THE INVENTION" should follow "DESCRIPTION" for clarity; lines 6, 7, note that reference to the "disjunctive" and "cardinality" is unclear and should be explained further for clarity; line 14, note that --(see FIG. 1)-- should follow "22" for consistency of description. Page 4, last line; Page 6, lines 1, 10, 15; Page 8, lines 10, 20: note that --as shown in FIG. 1-- should follow "10" (p. 4, last line); "manufacture" (p 6, l. 1); "2b" (p 6, l.10); "conductor (p 6, l. 15); "10" (p 8, ls. 10, 20), respectively. Page 8, line 14, note that --material-- should follow "foam" for consistency of description; line 29, note that --(not shown) -- should follow "bath" and "size", respectively for consistency with the drawing figures.

Appropriate correction is required.

The use of the trademark KAPTON (e.g. p5. L.23) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The use of the trademark KEVLAR (e.g. p 6, l. 10) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

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Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The use of the trademark MEGOLON (e.g. p 8, l. 1) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The use of the trademark NORYL-PX 1766 (e.g. p 8, l. 2) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The drawings are objected to because of the following: In fig. 2, flame retardant layer (16) should be properly cross-hatched as an insulating material; In ^{Fig.} 3, should a reference label --26-- be added to the far right hand end of the manufacture process? A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the inner and outer conductors being respectively "corrugated" (e.g. cls 2, 20, 23, 32, 38, 41, 47, 50, 5¹~~0~~) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claims 18; 26; 31-39; 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 contains the trademark/trade name KEVLAR. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe and, accordingly, the identification/description is indefinite.

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In claims 26, 35, 36, 44 note that “the Foam material (or layer)” lacks strict antecedent basis in respective independent claims 22, 31 and 40.

In claim 31, note that “heat resistant material” lacks antecedent basis.

The following claims have been found objectionable for reasons set forth below:

In claims 1, 17, 22, 31, 40, note that “formed” should be rewritten as --disposed-- at each occurrence.

In claims 1, 22, note that --the-- should be inserted between “about” and “flame” for clarity.

In claims 6, 16, 25, note that “its” should be rewritten as --the-- for clarity.

In claims 15, 28, 37, 46, note that “formed from” should be rephrased as --comprised of-- for clarity.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 19, 20; 22, 26, 27, 28, 29; 31, 35, 36, 37, 38;

40, 44-47; 49, 51 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Willis.

Willis (fig. 1) discloses a radiating cable or antenna comprising: an inner conductor (1); a dielectric layer (2) deposited on and surrounding the inner conductor (1); a mica paper tape (3) longitudinally wrapped about the dielectric layer (2); and aperture outer conductor (4) of a

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corrugated configuration having longitudinally spaced apertures or slots (5); and, an outer jacket assembly (6, 7, 8) surrounding the outer conductor. Note that the following characteristics are associated with the structural features of the radiating cable: the dielectric layer (2) may take various forms including cellular dielectric (i.e foam dielectric) as described at col 3, ls 31, 32; the mica paper tape can be a longitudinally overlapping bonded tape (col 3, ls 28-30) which is disclosed as having fire resistant characteristics (col 2, ls 53, 54) which provides for the benefit of preventing or at least delaying damage to the underlying dielectric (which supports the outer conductor) due to fire or heat (e.g. preventing the melting dielectric from bubbling or bursting through the radiating cable) as described at col 2, ls 56-61; the outer conductor (4) is a continuous corrugated copper foil tape with pre-punched shaped holes or apertures (5) therein and is longitudinally wrapped about the mica paper tape (3) as described at col 6, ls 23, 24; the outer jacket is comprised of a compound including rubber which inherently functions as a sealant (e.g. against moisture, etc).

Claims 22, 26-28, 30; 31, 35-37, 39; 40, 44-46, 48 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Watari et al.

Watari et al discloses a radiating coaxial cable or antenna comprising an inner conductor (1) surrounded by an insulating layer (2). A heat resistant film (5) is longitudinally wrapped about the dielectric layer (2). An outer conductor (6) having pre-formed slots or apertures (7) is longitudinally wrapped about the heat resistant layer (5). A protective jacket (8) is disposed

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the dielectric may become molten and thus capable
p about the outer conductor. In the event of fire, [^]of flowing out of the cable, but is prevented from flowing or bubbling out of the cable by the heat resistant layer (5), e.g. see co 3, ls 60-65.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 16; 25; 34; 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Willis.

Willis discloses that the mica tape layer and the outer conductor foil tape are respectively longitudinally wrapped, but do not explicitly disclose that an overlap in wrapping of between 5% to 50% of the respective circumference.

Accordingly, modifying the overlap to have been 5% to 50% of the circumference would have been an optimization of the amount of overlap given the general overlap condition set forth in Willis, thereby establishing the obviousness of such a modification.

Claims 2; 23; 32; 41; 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Willis in view of Bocher.

Willis discloses the radiating coaxial cable except for a corrugated inner conductor.

Bocher discloses that corrugated inner conductors for radiating cables is conventional in the art.

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Accordingly, it would have been obvious in view of the references, taken as a whole, to have used a corrugated inner conductor in Willis instead of a smooth inner conductor. Such a modification would have been considered an obvious substitution of art recognized inner conductors which would not have altered the function of such a cable.

Claims 3; 24; 33; 42; 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willis in view of Aberasturi.

Willis discloses the claimed radiating coaxial cable/antenna have the claimed heat resistant layer except that the inner conductor is not a smooth hollow wall structure.

Aberasturi discloses a radiating coaxial cable having a smooth wall hollow structure (10) functioning as the inner conductor of the radiating cable.

Accordingly, it would have been obvious in view of the reference, taken as a whole, to have substituted a smooth wall hollow inner conductor, as taught by Aberasturi, in place of the solid inner conductor of Willis. Such a modification would have been considered an obvious substitution of art recognized equivalent inner conductors for radiating cables which would not have affected the function of such cables.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willis in view of Martin.

Martin discloses adding a "string" or wire (7) to provide additional inductance to a radiating coaxial cable.

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Accordingly, it would have been obvious in view of the teaching of Martin to have added a “string” or wire to the radiating coaxial cable of Willis. Such a modification would have imparted the benefit of added inductance to radiating coaxial cable in Willis, as taught by Martin, thereby suggesting the obviousness of such a modification.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willis in view of Rampalli et al (cited by applicant).

Rampalli et al pertains to a radiating cable having radiating slots (14) which are oval shape, but can be other shapes (see col, ls 50-52).

Accordingly, it would have been obvious in view of the suggestion Rampalli et al to have realize the radiating aperture of Willis to have been of any appropriate shape (e.g. U shaped).

Claims 21; 30; 39; 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willis in view of Yoshida et al.

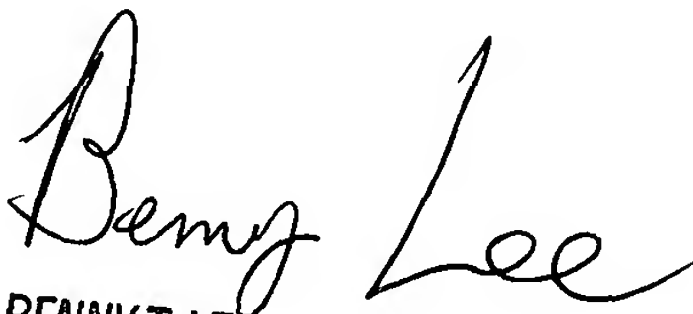
Yoshida discloses a radiating cable having a smooth wall hollow tube outer conductor (9).

Accordingly, it would have been obvious in view of the references, taken as a whole, to have substituted a smooth wall outer conductor in place of the corrugated outer conductor of Willis. Such a modification would have been considered on obvious substitution of art recognized outer conductors for radiating cables which would not have altered the function of such a cable, thereby suggesting the obviousness of such a combination.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lique discloses a radiating cable having a heat resistant layer between the dielectric and the outer conductor.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (703) 308-4902.


BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817

B LEE/pj

07/03/03